

Worksheet 15-11 Review:

$$3a. P(M) = \frac{121}{271} = 0.45$$

$$3g. P(B^c \cap F) = \frac{89}{271} = 0.33$$

(complement (NOT Buy))

4. Means that gender has no effect on a person's intention to buy online.

The probability would be the same for males and females ( $P(M) = P(F)$ ).

$$3d. P(B|F) = \frac{61}{150} = 0.41$$

(females)

$$3e. P(M|B) = \frac{54}{115} = 0.47$$

$$3h. P(F \cap B^c) = \frac{89}{271} = 0.33$$

$$3i. P(B^c|M) = \frac{67}{121} = 0.55$$

$$3f. P(B|M) = \frac{54}{121} = 0.45$$

5. "Two variables" is referring to gender and buying online.

$$\begin{array}{l} P(B|M) = 0.45 \\ P(B) = 0.42 \end{array} \left. \vphantom{\begin{array}{l} P(B|M) = 0.45 \\ P(B) = 0.42 \end{array}} \right\} \begin{array}{l} \text{These are} \\ \text{"close enough"} \\ \text{(within 0.05 of} \\ \text{each other)} \end{array}$$

Conclusion: Gender and buying online are independent variables.

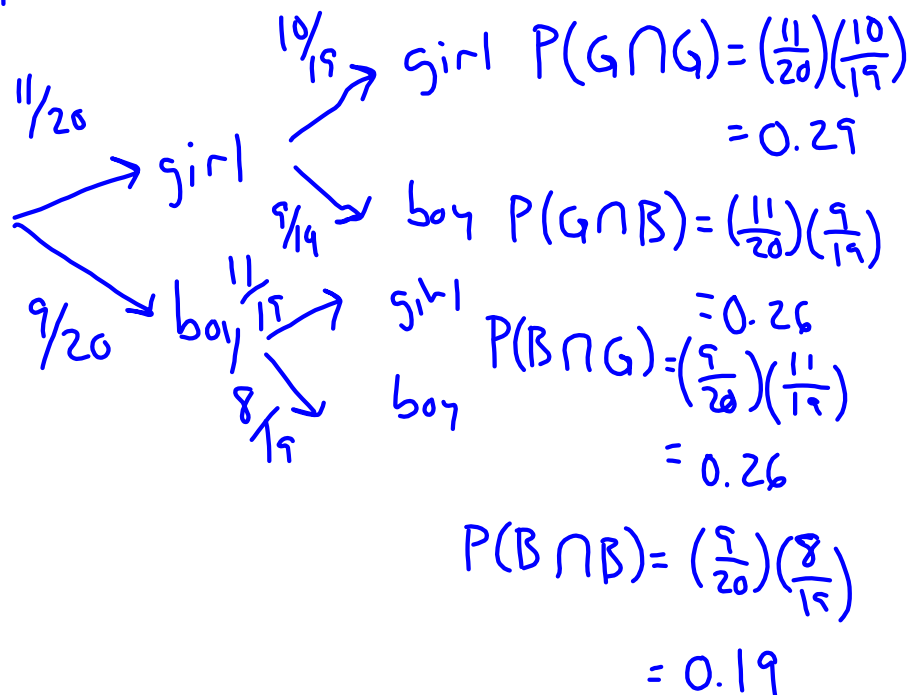
Review :

- We cannot double-count things:  
4B, 3R, 1Y, 6R, 7B, 9Y, 2Y, 3B  
already counts with odd, DO NOT count with red

$$\begin{aligned} P(\text{odd} \cup \text{red}) &= \frac{6}{8} = \frac{3}{4} = 0.75 \\ &= \frac{5}{8} + \frac{1}{8} = \frac{6}{8} \end{aligned}$$

Worksheet 15-15:

1. Dependent events (changes in numerator and denominator)



3.

